

REMARKS

[0001] For the Examiner's convenience and reference, Applicant's remarks are presented in substantially the same order in which the corresponding issues were raised in the Office Action. Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicant requests that the Examiner carefully review any references discussed below to ensure that Applicant's understanding and discussion of the references, if any, are consistent with the Examiner's understanding.

STATUS OF THE CLAIMS

[0002] Claims 1-7 and 9-16 were examined and remain pending. Claims 1-7 and 9-16 stand rejected. Claims 10 and 14 are currently amended. No new claims have been added. Claims 1-9 has been cancelled to place all method claims in one patent in anticipation of moving other classes of statutory subject matter to a continuation application. Applicant is not conceding that the subject matter encompassed by amended Claims 10 and 14 and cancelled Claims 1-9, prior to this Amendment is not patentable over the art cited by the Examiner. Claims 10 and 14 were amended and Claims 1-9 were cancelled solely to facilitate expeditious prosecution of the allowable subject matter noted by the Examiner. Applicant respectfully reserves the right to pursue claims, including the subject matter encompassed by Claims 1-9, as presented prior to this Amendment and additional claims in one or more continuing applications.

[0003] Claims 10 and 14 have been amended in substantially the same way to include the following element: "determining an unnecessary word for a first category on the basis of the relative number of occurrences of ~~a given~~ the word within at least one other category wherein a word is determined to be unnecessary in the first category in response to the word having a lesser greater number of occurrences than a given standard in the at least one other category, the given standard defined irrespective of the number of occurrences of the word in the first category." Applicant submits that these amendments help to clarify that unnecessary words are eliminated from the first category, based on the frequency of appearance of those words in other categories without dependence on the number of occurrences of the words in the first category as will be explained in more detail below.

[0004] Support for these amendments can be found in the specification at Figures 4-6 and the accompanying text.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 112

Claims 1, 6, 10, and 14 are rejected under 35 U.S.C. § 112 as failing to comply with the enablement requirement. The Office Action is correct that the specification teaches and supports determining that a word is unnecessary in response to the word having a **greater** number of occurrences than a given standard, rather than having a **lesser** number of occurrences than a given standard. Applicant has herein amended each of the remaining affected claims to change “lesser” to “greater” to place the claims in condition to overcome the § 112 rejection. Applicant appreciates the examiner’s diligence in discovering this error.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a)

Of the claims that are not herein cancelled, Claims 10-11 and 14-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pre-Grant Publication No. 2002/0169764 to Kincaid et al. (hereinafter “Kincaid”) in view of U.S. Patent No. 7,181,451 to Dehlinger et al. (hereinafter “Dehlinger”). Claims 12-13 stand rejected under § 103(a) as unpatentable over Kincaid in view of Dehlinger and further in view of U.S. Patent No. 7,099,819 to Sakai et al. (hereinafter “Sakai”). Accordingly, Applicant traverses these rejections as outlined below.

[0005] The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. MPEP at § 2142. It is well known that in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2142 under the heading “ESTABLISHING A *PRIMA FACIE* CASE OF OBVIOUSNESS.” The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicants’ disclosure. *Id.*

[0006] The Office Action fails to make a *prima facie* case of obviousness for each of amended Claims 10-16.

Independent Claims 10 and 14

[0007] With regard to Claim 10, the Office Action fails to make a *prima facie* case of obviousness, because the combined references of Kincaid and Dehlinger fail to teach all the limitations recited in Claim 10. Although Applicant believes that Claim 10 as previously presented included limitations not taught in the cited references, Claim 10 has been amended to further clarify the distinction between the present invention and the cited references. Specifically, the combination of Kincaid and Dehlinger fails to teach the element recited in amended Claim 10 of “determining an unnecessary word for a first category on the basis of the number of occurrences of the word within at least one other category wherein a word is determined to be unnecessary in the first category in response to the word having a greater number of occurrences than a given standard in the at least one other category, the given standard defined irrespective of the number of occurrences of the word in the first category.”

[0008] As the Office Action points out, Kincaid as modified by Dehlinger teaches determining a “selectivity value” for a word by relating the frequency of occurrence of the term in a library to the frequency of occurrence of the same term in one or more other libraries. Dehlinger teaches that this is typically done by computing a ratio of the frequency of the same term in two different libraries or fields. See col. 6, lines 36-40. Using the example in Dehlinger, if the term “electromagnetic” is found in 1,500 of 50,000 texts in one library, and in 500 of 150,000 texts in three other libraries where each library contains 50,000 texts, the selectivity value of the word, determined from the ratio of the frequency of occurrence of the term is therefore $15/500:5/1500$, or 9. See Dehlinger, col. 9, lines 46-59. (Dehlinger also contemplates the situation where the frequency of a term refers to the “total number of occurrences of a term in the texts in a library per total number of texts in the library” rather than the number of texts containing the term, and such an implementation would yield a similar result to the example described above. See Dehlinger, col. 6, lines 25-28.) Once a selectivity value is determined, Dehlinger teaches the elimination of “generic words” or words with a low selectivity score such as below about 1.25. See col. 5, lines 4-16 and col. 10, lines 20-25.

[0009] Conversely, the present invention does not rely on a relative relationship between the number of occurrences of a word in the first category and the number of occurrences of the word in other

categories (taught throughout Dehlinger as a ratio). Instead, the present invention as recited in Claim 10 relies on the frequency of the word in other categories irrespective of the number of occurrences of the word in the first category. In other words, the number of occurrences of the word in the first category is irrelevant in the determination of whether the word is unnecessary in that category. An unnecessary word in the present invention is eliminated based solely on the number of occurrences of a word in **other** categories being greater than a given standard. The cited references fail to teach or suggest any such concept and this distinction produces very significantly different results. A few examples may help to illustrate the distinction.

[0010] Consider the situation where there are two categories, each with 100 texts or documents, and each containing the word “electromagnetic”. Suppose that the first category has 50 occurrences of “electromagnetic” and that the second category also has 50 occurrences of “electromagnetic”. Using the teachings from the combination of Kincaid and Dehlinger, the result would be a determination that “electromagnetic” has a selectivity value of ‘0’ ($50/100:50/100$) for the first category. No matter how many occurrences of “electromagnetic” exist in each of the two categories, if the ratio of occurrences remains the same between the categories, then the selectivity value will be zero, which will result in the determination that “electromagnetic” is an unnecessary word to be eliminated.

[0011] Now consider the present invention, where the given standard for the second category is set to a value of 75, (perhaps determined by the number of documents in the second category ‘100’ multiplied by a threshold value ‘.75’). In determining whether “electromagnetic” is an unnecessary word for elimination from the first category, it will be determined that number of occurrences in the second category (50) is not greater than the given standard (75). Therefore, the word “electromagnetic” will not be eliminated as an unnecessary word, the complete opposite result of that taught in Dehlinger.

[0012] Now suppose that the first category has 1000 occurrences of “electromagnetic” and that the second category has 100 occurrences of “electromagnetic”. In this situation, the combined references teach a result where the selectivity value for “electromagnetic” is ‘10’ ($1000/100:100/100$), which indicates that there is many more occurrences of the word per document in the first category than the second, and therefore “electromagnetic” is a highly selective word that would not be eliminated (based on a selectivity threshold of 1.25 used as an example in Dehlinger). Conversely, the present invention would determine that “electromagnetic” is an unnecessary word in the first category, because the number of occurrences in the second category ‘100’ is greater than the given standard ‘75’. Thus, whether there is a very high number of occurrences in the first category (1,000) or whether there is a very low number

of occurrences (2) is irrelevant to the determination of whether or not a word is unnecessary in that category. This results in a very different result than is taught in the combination of Kincaid and Dehlinger.

[0013] Therefore, because the combined references fail to teach the subject matter recited in Claim 10, Applicant submits that Claim 10 is patentable over the cited references and is in condition for prompt allowance. Specifically, the combined references fail to teach “determining an unnecessary word for a first category on the basis of the number of occurrences of the word within at least one other category wherein a word is determined to be unnecessary in the first category in response to the word having a greater number of occurrences than a given standard in the at least one other category, the given standard defined irrespective of the number of occurrences of the word in the first category.”

[0014] Claim 14 includes the substantially the same subject matter as is recited in Claim 10 with some additional limitations including defining the given standard as “comprised of a predetermined threshold scaled by the number of documents in the at least one other category.” Therefore, Applicant submits that Claim 14 is also patentable over the cited references for the reasons stated above with regard to Claim 10.

Dependent Claims 11-13 and 15-16

Applicant respectfully submits that dependent Claims 11-13 and 15-16 are allowable as depending from allowable Claims 10 and 14 respectively. Therefore, Applicant requests that the rejection of these claims be withdrawn.

CONCLUSION

[0015] As a result of the presented amendments and remarks, Applicants assert that Claims 10-16 are patentable and in condition for prompt allowance. Should additional information be required regarding the amendment or traversal of the rejections of the independent and dependent claims enumerated above, the Examiner is respectfully asked to notify Applicant of such need. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contact the undersigned.

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